



Post-Traumatic Stress Disorder February, 2003

1. Kang HK, Natelson BH, Mahan CM, Lee KY, Murphy FM.
Veterans Health Administration, Department of Veterans Affairs, Washington, DC.
**Post-traumatic stress disorder and chronic fatigue syndrome-like illness
among
Gulf War veterans: a population-based survey of 30,000 veterans.**
Am J Epidemiol 2003 Jan 15;157(2):141-8

The authors estimated the prevalence of post-traumatic stress disorder (PTSD) and illness resembling chronic fatigue syndrome (CFS) in the entire population of Gulf War and non-Gulf-War veterans. They also evaluated the relation between the extent of deployment-related stress and the risk of either PTSD or CFS. In 1995-1997, the authors conducted a health survey in which these two symptom-based medical diagnoses in a population-based sample of 15,000 Gulf War veterans representing four military branches and three unit components (active, reserve, and National Guard) were compared with those of 15,000 non-Gulf veteran controls. Gulf War veterans, compared with non-Gulf veteran controls, reported significantly higher rates of PTSD (adjusted odds ratio = 3.1, 95% confidence interval: 2.7, 3.4) and CFS (adjusted odds ratio = 4.8, 95% confidence interval: 3.9, 5.9). The prevalence of PTSD increased monotonically across six levels of deployment-related stress intensity (test for trend: $p < 0.01$), while the prevalence of CFS rose only at the low end of the stress spectrum. While deployment-related stress could account for the higher risks of both PTSD and CFS, additional factor(s) unique to the Gulf environment may have contributed to the risk of CFS among Gulf War veterans.

2. Lohman H, Royeen C.
**Posttraumatic stress disorder and traumatic hand injuries: a neuro-
occupational view.**
Am J Occup Ther 2002 Sep-Oct;56(5):527-37

Using the clinical phenomenon of posttraumatic stress disorder related to traumatic hand injuries, this article conceptually explores the theoretical construct of neuro-occupation on the basis of these conditions. Neuro-occupation is an evolving concept that combines knowledge and understanding of occupation with knowledge and understanding of how the human brain functions in environmental context; thus, the concept is important to the core of occupational therapy practice. The first section of the article introduces the concept of neuro-occupation; the second provides an overview of posttraumatic stress disorder and traumatic hand injury. To help

therapists better understand behavior seen in clinical settings, the third section presents key neuro-occupational processes pertaining to posttraumatic stress disorder, using clinical application examples. Finally, a query about the value of neuro-occupation as a developing theoretical construct is put forth.

3. Beckham JC, Calhoun PS, Glenn DM, Barefoot JC.

Posttraumatic stress disorder, hostility, and health in women: a review of current research.

Ann Behav Med 2002 Summer;24(3):219-28

A large body of evidence indicates that hostility is related to increased morbidity and mortality and evidence is growing that posttraumatic stress disorder (PTSD) is associated with poorer health outcomes. The majority of this research, however, has been conducted in male samples. As a result, the connections between PTSD and hostility and the ramifications of these variables on health in women are less clear. We review the current literature examining PTSD, hostility, and health in women and discuss possible mechanisms underlying the relationship between PTSD and hostility on health outcomes in the context of a proposed theoretical model. Although the current literature suggests that hostility and PTSD are related to health in women, more rigorous, focused research is lacking. A number of suggestions for future research are provided.

4. Pfefferbaum B, Vinekar SS, Trautman RP, Lensgraf SJ, Reddy C, Patel N, Ford AL.
The effect of loss and trauma on substance use behavior in individuals seeking support services after the 1995 Oklahoma City bombing.

Ann Clin Psychiatry 2002 Jun;14(2):89-95

In this study, we examined the effect of trauma exposure on substance use behaviors, specifically tobacco and alcohol use, in a group of 84 individuals who sought supportive services after the 1995 Oklahoma City bombing. A self-report instrument was used to assess demographics, sensory exposure, injury, interpersonal exposure through relationship with victims, peritraumatic reaction, grief, posttraumatic stress, worry about safety, functional impairment, and changes in smoking and drinking. Those who reported increased smoking had higher scores on peritraumatic reaction, grief, posttraumatic stress, worry about safety, and trouble functioning. Those who reported increased alcohol intake had higher scores on injury, peritraumatic reaction, grief, posttraumatic stress, worry about safety, and trouble functioning. Sensory exposure and interpersonal exposure were not significantly different between those with and without increased smoking or drinking. Although no causal relationship can be assumed, our findings indicate an association of grief and posttraumatic stress with increased substance use behaviors in disaster victims.

5. Gauvin CL, Wilson IG

Post-traumatic stress disorder in a group of Australian general practices.

Aust Fam Physician 2002 Nov;31(11):1049-51

BACKGROUND: Some authorities regard post-traumatic stress disorder (PTSD) as a well characterised condition that is under diagnosed in general practice. We aimed to explore its prevalence in Australian general practice. METHOD: 'Medic-GP' contains the records of 58,941 patients over a period of six years.

We searched the database for PTSD and synonyms in individual records, looking for diagnostic criteria and comorbidities. RESULTS: Post-traumatic stress disorder was diagnosed in 337 patients, an annual incidence of 88/100,000 patients over a 6.5 year period. Specialists diagnosed 312 (93%) after referral by general practitioners. The GPs diagnosed 25 (7%) themselves, of whom only five patients (20%) had all seven diagnostic criteria recorded, and only 16% were free of comorbidities. DISCUSSION: General practitioners diagnosed PTSD infrequently, and at levels lower than that seen in the community. The usual psychiatric criteria were seldom recorded. Comorbid conditions were common.

6. Engelhard IM, van den Hout MA, Arntz A, McNally RJ.

A longitudinal study of "intrusion-based reasoning" and posttraumatic stress disorder after exposure to a train disaster.

Behav Res Ther 2002 Dec;40(12):1415-24

Previously, we found that chronic PTSD relates to "intrusion-based reasoning" (IR), i.e. the tendency to interpret distressing intrusions themselves as evidence that danger is impending, regardless of objective danger information (Engelhard et al., *Behav. Res. Ther.* 39 (2001) 1139). This study was intended to elucidate the causal status of this relation. Twenty-nine residents of a Belgian town witnessed a train crash and were assessed for IR and PTSD symptoms within 1 month and were re-assessed for PTSD at 3.5 months. Fourteen control residents did not witness the crash and were also tested for IR. The IR paradigm involved rating the danger of brief scenarios in which objective danger and presence of intrusions about the crash were systematically varied. The directly exposed residents showed greater danger ratings to scenarios in which intrusions were included than did the controls. IR was strongly related to both acute and chronic PTSD symptoms. It did not significantly predict chronic PTSD symptoms after controlling for acute symptoms, although the partial correlation ($r=0.26$, $p=0.09$) was in the expected direction. The data suggest that IR is involved in the onset and maintenance of PTSD symptoms, but more clarity about causality awaits future larger and experimental studies.

7. Runyon MK, Kenny MC.

Relationship of attributional style, depression, and posttrauma distress among children who suffered physical or sexual abuse.

Child Maltreat 2002 Aug;7(3):254-64

This study examined the relationship of attributional style, posttrauma, and depressive symptoms among children who have suffered either physical or sexual abuse. Ninety-eight children (67 physically abused, 31 sexually abused) were administered a depression inventory, the Post-Traumatic Stress Disorder-Reaction Index (PTSD-RI), and Children's Attributional Style Questionnaire (CASQ). With regard to group differences, the sexual abuse group scored significantly higher on the PTSD-RI, whereas the physical abuse group scored higher on the CASQ Composite for Negative Events. Results also indicated that attributional style predicted depression beyond the variance accounted for by abuse type (i.e., physical or sexual). However, the best predictor of PTSD-RI scores was an interaction effect between abuse type and negative attributional style. Clinical implications of these findings for children who suffer abuse are discussed.

8. Meiser-Stedman R.

Towards a cognitive-behavioral model of PTSD in children and adolescents.

Clin Child Fam Psychol Rev 2002 Dec;5(4):217-32

Posttraumatic stress disorder in children and adolescents has been studied only for the past 15-20 years and is the subject of a burgeoning corpus of research. Much research has focused on examining whether children and adolescents have the same responses to trauma as those experienced by adults. Many of the research tools used to investigate children's responses are taken from measures designed for use with adults, and these measures have proven to be useful. However, it has not been established that children's responses to traumatic events are related to the same underlying processes as are adults' responses. The possible application of 2 recent cognitive models of PTSD in adults to understanding PTSD in children and adolescents is discussed in this paper, within the context of what is already known about children's reaction to trauma and existing theoretical accounts of childhood PTSD. Particular attention is paid toward the nature of children's memories of traumatic events and how these memories relate to the reexperiencing symptoms of PTSD, and cognitive processes that may play a role in the maintenance of PTSD. It is proposed that the adoption of a more specific cognitive-behavioral framework in the study of this disorder may be beneficial and lead to better treatment outcomes.

9. Solter V, Thaller V, Karlovic D, Crnkovic D.

Elevated serum lipids in veterans with combat-related chronic posttraumatic stress disorder.

Croat Med J 2002 Dec;43(6):685-9

AIM: To assess possible differences in serum cholesterol, low density lipoprotein cholesterol (LDL-C), high density lipoprotein cholesterol (HDL-C), triglycerides, arteriosclerosis index, established risk factor (ERF) of arteriosclerosis, and 10-year risk for coronary disease according to the Adult Treatment Panel III (ATP-III) between veterans with combat-related posttraumatic stress disorder (PTSD) and a control group consisting of patients with major depressive disorder. METHOD: We determined serum cholesterol, LDL-C, HDL-C, and triglycerides in the patients with PTSD (n = 103) and patients with major depressive disorder (n = 92), using the enzyme-assay method. AI, ERF, and ATP-III were calculated from cholesterol, LDL-C,

and HDL-C levels. The groups were matched in age and body mass index (BMI). Patients with major depressive disorder were chosen as a control group because they do not have changes in serum lipids. RESULTS: Patients with combat-related PTSD had higher mean concentration of cholesterol (6.2+/-1.1 mmol/L vs 5.3+/-0.9 mmol/L; $p < 0.001$), LDL-C (3.9+/-0.7 mmol/L vs 3.5+/-1.0 mmol/L; $p = 0.005$), and triglycerides (2.9+/-2.3 mmol/L vs 1.5+/-0.5 mmol/L; $p < 0.001$), and lower HDL-C (1.0+/-0.3 mmol/L vs 1.3+/-0.2 mmol/L; $p < 0.001$) than the control group. Arteriosclerosis index (4.2+/-1.2 vs 3.7+/-1.7; $p = 0.050$), ERF (6.4+/-1.9 vs 5.5+/-2.4; $p = 0.010$), and ATP-III (12.1+/-3.3 vs 10.2+/-3.8; $p < 0.001$) were higher in PTSD than in the control group. CONCLUSION: Elevated concentrations of serum lipids are associated with combat-related PTSD. This may imply that patients with combat-related PTSD are under a higher risk for arteriosclerosis.

10. Murphy SA, Johnson LC, Wu L, Fan JJ, Lohan J.

Bereaved parents' outcomes 4 to 60 months after their children's deaths by accident, suicide, or homicide: a comparative study demonstrating differences.

Death Stud 2003 Jan;27(1):39-61

In this article, the authors revisit a controversial issue in the bereavement field: Does one violent cause of death of a child influence parents' outcomes more than another? To address this question, we observed 173 parents prospectively 4, 12, 24, and 60 months after their children's deaths by accident, suicide, or homicide. Quantitative and qualitative research methods were used to examine the influence of three types of a child's violent death and time since death upon 4 parent outcomes (mental distress, post-traumatic stress disorder [PTSD], acceptance of the child's death, and marital satisfaction). The results showed a significant interaction for the bereavement Group x Time effect for acceptance of death, a significant main effect for time for all four outcomes, and a significant main effect for group (homicide) for PTSD. Nearly 70% of the parents reported that it took either 3 or 4 years to put their children's death into perspective and continue with their own lives; however the child's cause of death did not significantly influence parents' sense of timing in this regard. Clinical and research implications of the findings are discussed.

11. Lubin G, Weizman A, Shmushkevitz M, Valevski A.

Short-term treatment of post-traumatic stress disorder with naltrexone: an open-label preliminary study.

Hum Psychopharmacol 2002 Jun;17(4):181-5

Eight patients (6 men and 2 women) with chronic post-traumatic stress disorder (PTSD) were treated with naltrexone 100-200 mg/day. Seven patients completed 2 weeks of treatment. A subtle and clinically insignificant improvement was noted in intrusive and hyperarousal symptoms ($p < 0.05$ for both), but not in avoidance symptoms. All patients demonstrated side effects which limited the targeted dose. It is suggested that the subtle positive effect of naltrexone and the hypersensitivity of these patients to its side effects do not encourage the use of naltrexone in the treatment of PTSD patients.

12. Stein MB, Hofler M, Perkonig A, Lieb R, Pfister H, Maercker A, Wittchen HU.

Patterns of incidence and psychiatric risk factors for traumatic events.

Int J Methods Psychiatr Res 2002;11(4):143-53

Individual differences are thought to influence the propensity for exposure to trauma and the subsequent development of post-traumatic stress disorder (PTSD) symptoms. Prior research has identified pre-existing mood disorders as one such individual risk factor for traumatic events as well as for PTSD. The present study reports the incidence of traumatic events (and PTSD) and examines psychiatric risk factors for trauma exposure in a prospective community sample. Data come from a prospective, longitudinal epidemiological study of adolescents and young adults (age 14-24) in Munich, Germany. Respondent diagnoses (N = 2,548) at baseline and at follow-up 34-50 months later were considered. Psychiatric diagnoses at baseline were examined as predictors of qualifying trauma. Baseline prevalence of persons having experienced trauma meeting DSM-IV A1 and A2 criteria ('qualifying trauma') was 16.7%; during the follow-up period, 20.3% persons had experienced incident (new) qualifying traumata. The prevalence of PTSD, including subthreshold cases, at baseline was 5.6%; by the end of the follow-up period this had increased to 10.3%. Presence of an anxiety disorder at baseline predicted exposure to qualifying traumas during the follow-up period (adjusted ORs ranging from 1.36 for any trauma type to 3.00 for sexual trauma); this association was apparently due to an increased tendency to report events as being particularly horrific (meeting A2 criteria). In contrast, presence of illicit drug use predicted the onset of traumatic events (specifically assaultive and sexual trauma) meeting at least A1 criteria, suggesting an actual exposure to these types of traumatic events for this class of disorders. In this prospective study of urban adolescents and young adults, certain classes of pre-existing psychiatric disorders (most notably anxiety disorders and illicit drug use disorders) were associated with increased risk for qualifying traumatic events. The mechanisms by which premorbid psychiatric disorders promote exposure to traumatic events are unknown. Better understanding of these pathways may lead to novel strategies for primary and secondary prevention of PTSD.

13. Alao AO, Soderberg M.

Sickle cell disease and posttraumatic stress disorder.

Int J Psychiatry Med 2002;32(1):97-101

Sickle Cell Disease (SCD) is a common condition among African Americans. It is associated with severe complications including severe pain in the chest, back, abdomen, or extremities. Individuals with SCD also have a reduced life span. Post traumatic stress disorder (PTSD) is a condition increasingly being recognized. In this article we discuss, to our knowledge, the first case of a patient with comorbid sickle cell disease and post-traumatic stress disorder.

14. Bell Meisenhelder J.

Terrorism, posttraumatic stress, and religious coping.

Issues Ment Health Nurs 2002 Dec;23(8):771-82

The events of September 11, 2001 triggered a widespread national response that was two-fold: a posttraumatic stress reaction and an increase in attendance in religious services and practices immediately following the tragic events. The following discussion traces the existing research to distinguish this posttraumatic stress reaction from posttraumatic stress disorder as a recognized psychiatric diagnosis. This disaster reaction is then examined in light of the research on religious coping, delineating both its positive and negative aspects and the respective outcomes. A conceptual model illustrates the benefits in seeking religious comfort for

managing a post disaster stress response. Nursing implications for practice are discussed.

15. Ohan JL, Myers K, Collett BR.

Ten-year review of rating scales. IV: scales assessing trauma and its effects.

J Am Acad Child Adolesc Psychiatry 2002 Dec;41(12):1401-22

OBJECTIVE: This article summarizes scales assessing trauma and its effects on youths. METHOD: We sampled trauma-related articles published over the past 25 years, with an emphasis on the past decade, selected scales with at least several publications, and reviewed their properties. Those with minimally adequate psychometric properties and continued literature citations or a special niche are presented. RESULTS: Most of trauma-related scales are relatively new, reflecting the evolving interest in juvenile trauma. Therefore, they do not have the depth of psychometric examination nor the breadth of applications described for previously reviewed scales. However, they have been applied to various traumatic situations. These scales assess a range of trauma-related symptoms and behaviors, including posttraumatic stress disorder, symptoms related to posttraumatic stress disorder, and dissociation. Additionally, several scales assess the trauma itself.

CONCLUSIONS: Trauma-related scales show promise for research and clinical use in understanding youths' responses to trauma. However, their utility for treatment planning and for accountability in practice is generally not as clear. The potential user must clearly define the goals of measurement and use these scales within their limited roles. With these caveats, trauma-related scales may assist our work with traumatized youths.

16. Amir M, Ramati A.

Post-traumatic symptoms, emotional distress and quality of life in long-term survivors of breast cancer: a preliminary research.

J Anxiety Disord 2002;16(2):195-206

The present study is a preliminary study assessing long-term psychological effects in survivors of breast cancer. Thirty-nine long-term female survivors of breast cancer were compared with 39 matched women who had not been exposed to any chronic disease regarding post-traumatic stress disorder (PTSD), quality of life (QoL), emotional distress and coping styles. Survivors revealed significantly higher rates of full and partial PTSD, scored significantly higher on emotional distress, scored significantly lower on physical and psychological QoL and exhibited coping styles significantly different from those of the control group. PTSD was associated with the coping style of suppression. Multiple regression analysis showed that receiving chemotherapy and disease stage, as well as the interaction between chemotherapy and disease stage, were significant predictors of hyperarousal. The findings show that post-traumatic symptoms are a common sequel after recovery from cancer. Furthermore, finding suggest a conceptual distinction between PTSD symptoms and QoL in the study of long-term effects of cancer.

17. Krakow B, Schrader R, Tandberg D, Hollifield M, Koss MP, Yau CL, Cheng DT.

Nightmare frequency in sexual assault survivors with PTSD.

J Anxiety Disord 2002;16(2):175-90

Sexual assault survivors with post-traumatic stress disorder (PTSD) were assessed for frequency of nightmares, measured retrospectively on the Nightmare Frequency

Questionnaire (NFQ) and prospectively on nightmare dream logs (NLOG). Retrospective frequency was extremely high, averaging occurrences every other night and an estimated number of nightmares greater than five per week. Test-retest reliability data on the NFQ yielded weighted kappa coefficients of .85 (95% CI, .74-.95) for nights and .90 (95% CI, .83-.97) for nightmares. Correlations between retrospective and prospective nightmare frequencies ranged between .53 ($P = .001$) for nights and .63 ($P = .001$) for nightmares. Correlations between frequency and distress measures (anxiety, depression, post-traumatic stress) yielded coefficients ranging from ($r = .28-.53$). Compared with intrusive, cumbersome and time-consuming prospective measurements, the NFQ appears reliable, convenient, and equally useful in assessing nightmare frequency in a group of sexual assault survivors. Nightmare frequency, prevalence, distress and impairment are discussed.

18. Seng JS.

A conceptual framework for research on lifetime violence, posttraumatic stress, and childbearing.

J Midwifery Womens Health 2002 Sep-Oct;47(5):337-46

The objective of this theoretical article is to describe a conceptual framework for research on effects of past and current abuse and posttraumatic stress on childbearing women. The proposed framework builds on an earlier framework proposed by the Centers for Disease Control and Prevention (CDC) for research on violence occurring around the time of pregnancy. Two main adaptations are suggested. First, cumulative lifetime history of abuse trauma is added to the framework in addition to violence occurring around the time of pregnancy. Second, posttraumatic stress disorder (PTSD) is given greater emphasis as a potential factor contributing to adverse maternity outcomes based on the theoretical proposition that PTSD could be a plausible mechanism for adverse outcomes via both behavioral and neuroendocrine pathways. More research is needed on the effects of violence and PTSD on childbearing. This framework for research could be used to facilitate design of studies in which investigators want to consider PTSD as a potential mediator between lifetime exposure to violence and negative childbearing processes and outcomes. It is congruent with a CDC framework for research and could be incorporated into studies designed to meet their recommendations.

19. Chudakov B, Ilan K, Belmaker RH, Cwikel J.

The motivation and mental health of sex workers.

J Sex Marital Ther 2002 Jul-Sep;28(4):305-15

Commercial sex work presents specific mental health concerns. We aimed to study motivation for sex work and mental health issues in a sample of such women. We contacted 55 consenting women through organized brothels and interviewed them using the Farley questionnaire and screening items for posttraumatic stress disorder (PTSD) and depression. Eighty-two percent of the women had arrived illegally and had been "trafficked." All but 2 were engaged voluntarily in sex work. Seventeen percent met criteria for PTSD, and 19% were likely to be clinically depressed. We present representative case histories. Availability of mental health treatment for workers in the sex industry could improve compliance with HIV prevention programs and enlarge options for women to leave the sex industry. We observed that stereotypes of sex workers as either always having histories of childhood abuse or as being always "happy hookers" were incorrect.

20. Miranda R Jr, Meyerson LA, Marx BP, Tucker PM.

Civilian-based posttraumatic stress disorder and physical complaints: evaluation of depression as a mediator.

J Trauma Stress 2002 Aug;15(4):297-301

This study examined the role of comorbid depression in the somatic complaints of 32 individuals with civilian-based posttraumatic stress disorder (PTSD) while restricting the influence of detectable pathophysiology and additional psychiatric conditions. It was hypothesized that depressive symptomatology would mediate the relationship between PTSD and somatic symptom reporting. Participants were administered structured clinical interviews, a physical examination, and an electrocardiogram. Results of this study supported the hypothesis that depressive symptoms mediate the relationship between PTSD and physical complaints. These results add to a growing body of literature that suggests psychological factors play an influential role in the physical symptom reports of individuals with PTSD.

21. Moreau C, Zisook S.

Rationale for a posttraumatic stress spectrum disorder.

Psychiatr Clin North Am 2002 Dec;25(4):775-90

An understanding of PTSD and stress-related conditions is in its infancy. This is not surprising given the fact PTSD was not recognized as a distinct diagnostic entity until 1980. Since that time, the diagnostic classification has undergone continuous change as our understanding of PTSD is refined. The authors believe that PTSD can be best understood through a dimensional conceptualization viewed along at least three spectra: (1) symptom severity, (2) the nature of the stressor, and (3) responses to trauma. Along the severity spectrum, studies that review diagnostic thresholds reveal significant prevalence of PTSD symptoms and impairment that results from subthreshold conditions. Comorbidity patterns suggest that when PTSD is associated with other psychiatric illness, diagnosis is more difficult and the overall severity of PTSD is considerably greater. With regard to a stressor criteria spectrum, the diagnostic nomenclature initially only recognized severe forms of trauma personally experienced. More recently, however, the person's subjective response and events occurring to loved ones were included. This has greatly broadened the stressor criteria by leading to an appreciation of the range of precipitating stressors and the potential impact of "low-magnitude" events. Given that responses to trauma vary considerably, another possible spectrum includes trauma-related conditions. Traumatic grief, somatization, acute stress disorder and dissociation, personality disorders, depressive disorders, and other anxiety disorders all have significant associations with PTSD. Further research is needed to clarify and expand the current understanding of PTSD and other trauma-related conditions. Consideration of the severity of symptoms and the range of stressors coupled with the various disorders precipitated by trauma should greatly influence scientific research. The future undoubtedly will bring a refinement of the current understanding of PTSD and improved treatments.

22. Rabois D, Batten SV, Keane TM.

National Center for PTSD, VA Boston Healthcare System

Implications of biological findings for psychological treatments of post-traumatic stress disorder.

Psychiatr Clin North Am 2002 Jun;25(2):443-62, viii

The goal of this article is to initiate dialogue among those conducting research on the biological aspects of post-traumatic stress disorder (PTSD) and clinicians and researchers concerned with developing effective psychological treatments for PTSD. Important biological findings in PTSD are reviewed, paying special attention to the clinical implications of these findings. A discussion of the psychological treatments effective for PTSD follows, focusing on how these empirically supported treatments may address some of the issues raised by the biological findings. Finally, suggestions are made for future directions for psychological treatment development for this disabling condition, examining how these innovative treatment approaches may be relevant to the reviewed biological findings.

23. Sullivan GM, Gorman JM.

Finding a home for post-traumatic stress disorder in biological psychiatry. Is it a disorder of anxiety, mood, stress, or memory?

Psychiatr Clin North Am 2002 Jun;25(2):463-8, ix

The collection of articles in this issue constitutes the most thorough review of posttraumatic stress disorder (PTSD) yet. At this point, the accumulated phenomenological, epidemiological, biological, and treatment evidence make it crystal clear that PTSD stands alone as a unique psychiatric disorder. It is not the same as depression, although many PTSD patients are also depressed, and it is not the same as the other anxiety disorders, although PTSD patients frequently also suffer with panic attacks, social avoidance, and obsessive ruminations.

24. Golier J, Yehuda R.

Bronx VA Medical Center

Neuropsychological processes in post-traumatic stress disorder.

Psychiatr Clin North Am 2002 Jun;25(2):295-315, vi

The unique constellation of symptoms that constitute post-traumatic stress disorder (PTSD) may reflect persistent alterations in attention and memory that are fundamental to this disorder. This article reviews the literature on the neuropsychology of PTSD and its relevance to phenomenological, clinical, and biological aspects of this disorder. It addresses the nature and magnitude of the neuropsychological alterations in PTSD and the extent to which they involve the processing of trauma-related or neutral stimuli. This article summarizes the types of deficits in attention and memory that have been found in a broad range of trauma survivors with PTSD and explores the extent to which the deficits may be risk factors for or consequences of trauma and PTSD. The implications of these findings for the course and pathophysiology of PTSD are also discussed.

25. Marshall RD, Garakani A.

Psychobiology of the acute stress response and its relationship to the psychobiology of post-traumatic stress disorder.

Psychiatr Clin North Am 2002 Jun;25(2):385-95

The literature to date that examines the biology of the acute stress reactions suggests that relatively lower baseline cortisol is associated with the development of PTSD. This is particularly informative because of the ongoing controversy surrounding baseline cortisol in PTSD. What does seem clear, however, is that this

characteristic is relatively nonspecific to PTSD, given the fact that low cortisol has been observed in multiple subject populations, including normal individuals under chronic stress as well as chronic medical conditions. For example, it is possible that reduced baseline cortisol reflects the net result of input to the hypothalamus from cortical and subcortical regions of the brain linked to increased vigilance, sensitization to trauma because of prior traumatic experiences, or genetic factors. The development of PTSD is associated with sensitization of the startle response. Because the neurobiology of startle is well characterized, this finding implicates a role for specific neurocircuitry in PTSD. Non-habituation of the startle response in PTSD appears related to sensitization specifically to contextual cues (i.e., the environment) that signal the presence of potential threat of danger-related fears. This may be the neurobiological correlate to the over-generalization seen in PTSD that distinguishes the disorder from a simple trauma-induced phobia. The fact that a number of vulnerability factors associated with increased risk for developing PTSD are also likely to be biologically based (e.g., a genetic component, prior psychiatric history, prior family history of psychiatric disorder), provides further evidence in support of a role for psychobiological factors in producing PTSD. Nevertheless, the considerable overlap on these measures between those who will develop PTSD, and those who eventually recover spontaneously, belies any attempt to identify any single or pathognomonic biological marker for risk. For now, the standard of care in predicting level of symptomatology and prognosis in the acute setting continues to be based on careful, informed, serial assessments of symptoms and functioning. Because the capacity to learn from and adapt to adverse conditions are essential to the survival of any species, understanding the neurobiological pathways that mediate learning from traumatic experiences in an adaptive way is as important as understanding the etiology of PTSD and other trauma-related maladaptive consequences. No acutely administered pharmacologic treatment to date has been shown effective in accelerating the process of recovery or in preventing the development of chronic PTSD. However, pharmacologic interventions that would prevent sensitization of circuits related to context-dependent threat perception, dysregulation of affect, and/or dysregulation of normal circadian rhythms are of theoretical interest and deserve further study.

26. Wong CM.

Post-traumatic stress disorder: advances in psychoneuroimmunology.

Psychiatr Clin North Am 2002 Jun;25(2):369-83, vii

Exposure to trauma can result in immune dysregulation, and increasing evidence suggests that there are immune alterations associated with post-traumatic stress disorder (PTSD). However, the exact nature of these immune findings in PTSD has not been defined. The study of psychoneuroimmunology in PTSD is relevant not only for understanding the biological underpinnings of this disorder, but also for establishing the nature of the associations between PTSD and other medical and psychiatric illnesses.

27. Yehuda R.

Current status of cortisol findings in post-traumatic stress disorder.

Psychiatr Clin North Am 2002 Jun;25(2):341-68, vii

This article summarizes findings of hypothalamic-pituitary-adrenal axis alterations in post-traumatic stress disorder (PTSD) and evaluates likely reasons for the lack of agreement among published studies. Sources of variance caused by methodologic and interpretative differences are highlighted, but the disparate findings are

explained as illustrating a more complex neuroendocrinology of PTSD than has previously been described.

28. Friedman MJ.

Future pharmacotherapy for post-traumatic stress disorder: prevention and treatment.

Psychiatr Clin North Am 2002 Jun;25(2):427-41

I have presented two complementary lines of speculation in this article. First, I have presented a public health model of resilience, prevention, acute intervention, and tertiary treatment to inform a pharmacotherapeutic strategy for PTSD in the future. Second, I have proposed a rational rather than an empirical approach to the clinical pharmacology of PTSD. Such an approach suggests that efforts be directed toward the development and testing of new classes of drugs designed to target the unique pathophysiology of PTSD.

29. Grossman R, Buchsbaum MS, Yehuda R.

Neuroimaging studies in post-traumatic stress disorder.

Psychiatr Clin North Am 2002 Jun;25(2):317-40, vi

The authors review some of the advances that have been made in understanding the structural, biochemical, and functional neuroanatomy of post-traumatic stress disorder (PTSD). First, the authors review the primary brain regions that had been hypothesized a priori, from the phenomenology and neurobiology of PTSD, to be implicated in the pathophysiology. Next, they review findings from neuroimaging studies of these brain regions in PTSD, and explain the various experimental methods and imaging technologies used in these studies. A broader perspective, including a discussion of additional brain areas that may be involved in PTSD, is synthesized. The authors conclude with a rationale and approach for studies testing sharply defined hypotheses and those using multidisciplinary strategies that integrate neuroimaging data with other cognitive, biologic, and genetic tools to study this complex disorder.

30. Orr SP, Metzger LJ, Pitman RK.

Psychophysiology of post-traumatic stress disorder.

Psychiatr Clin North Am 2002 Jun;25(2):271-93

In general, the results of psychophysiological research on PTSD support the presence of a variety of autonomic, sensory, and cognitive processing differences between individuals with and without the disorder. The findings are diverse and include heightened responsiveness to trauma reminders; exaggerated startle; increased conditionability and autonomic responsiveness to aversive, high-intensity stimuli; and elevated tonic or baseline physiologic activity. Increased sensitivity of the central nervous system is suggested by electrophysiologic evidence for a failure to habituate to redundant information, over-responsiveness to novel information, and reduced cortical responsiveness to overstimulation. Cognitive processing abnormalities are suggested by electrophysiologic evidence for a reduced ability to attend to task-relevant information and increased attention to task-irrelevant, trauma-related information in individuals with PTSD. Some findings, such as the heightened physiologic and P300 response amplitude responses to trauma-related stimuli and increased HR response to loud tones, have been highly replicable and appear to be as reliable as any biologic finding in the psychiatric literature. Other findings, such as

increased eye-blink startle responses and tonic or baseline physiologic activity, have been less consistently replicated and have led investigators to explore how stressful or threatening experimental contexts might produce phasic alterations in the psychophysiology of individuals with PTSD. We hope that the broad range of psychophysiological investigations and findings in PTSD will inspire others to consider possible applications of these methodologies to their own clinical and research endeavors.

31. McFarlane AC, Yehuda R, Clark CR.

Biologic models of traumatic memories and post-traumatic stress disorder. The role of neural networks.

Psychiatr Clin North Am 2002 Jun;25(2):253-70

Neural networks and their behavior provide an information-processing model for initiation and maintenance of the biologic aspects of post-traumatic stress disorder (PTSD). The repeated replaying of the intrusive and distressing recollections that follow a trauma modifies the structure of the neural networks involved in the processing of traumatic memories. The hypothesis is proposed that this repetition instigates the mechanisms of iterative learning, top-down activation and pruning. The development of the symptoms of PTSD can be explained by current knowledge about modeling disturbances of parallel distributing processing. The noradrenergic neurons play a central role in coordinating the interaction of multiple cortical regions, which is an essential aspect of parallel distributed processing. Disturbances of this system in PTSD are likely to be manifest as a dysfunctional modulation of working memory and involuntary traumatic recollection. Modifications of neural networks have a secondary effect of kindling in the hippocampus that further moderates the individual's sensitivity to a range of stressors. Therefore, a neural network model of PTSD provides a method for conceptualizing the onset of PTSD symptoms and their subsequent modification with the passage of time.

32. McEwen BS.

The neurobiology and neuroendocrinology of stress. Implications for post-traumatic stress disorder from a basic science perspective.

Psychiatr Clin North Am 2002 Jun;25(2):469-94, ix

Stress is a condition of the mind and a factor in the expression of disease that differs among individuals. In post-traumatic stress disorder (PTSD), traumatic events can create a long-lasting state of physiologic reactivity that amplifies and exacerbates the effects of daily life events. The elevated activities of physiologic systems lead to wear and tear, called "allostatic load." It reflects not only the impact of life experiences but also of genes, individual life-style habits (e.g., diet, exercise, and substance abuse), and developmental experiences that set life-long patterns of behavior and physiologic reactivity. Hormones associated with stress and allostatic load protect the body in the short run and promote adaptation, but in the long run allostatic load causes changes in the body that lead to disease.

33. Difede J, Hoffman H, Jaysinghe N.

Innovative use of virtual reality technology in the treatment of PTSD in the aftermath of September 11.

Psychiatr Serv 2002 Sep;53(9):1083-5

34. Franklin CL, Sheeran T, Zimmerman M.

Screening for trauma histories, posttraumatic stress disorder (PTSD), and subthreshold PTSD in psychiatric outpatients.

Psychol Assess 2002 Dec;14(4):467-71

The ability of the Structured Clinical Interview for DSM-IV (SCID) posttraumatic stress disorder (PTSD) module's screening question to identify individuals with PTSD or subthreshold PTSD was examined. First, the screen's sensitivity for detecting a trauma history was determined. Second, the incremental validity of a more thorough trauma assessment was examined by determining how many individuals responded negatively to the screen but then were diagnosed with PTSD or subthreshold PTSD. Last, the optimal SCID termination point for assessing subthreshold PTSD was determined. Using a trauma list increased the number of participants reporting a trauma; however, the SCID screen captured almost all individuals who had PTSD or subthreshold PTSD. When one screens for subthreshold PTSD, the SCID can be terminated on failure to meet Criterion B.

35. Bury AS, Bagby RM.

The detection of feigned uncoached and coached posttraumatic stress disorder with the MMPI-2 in a sample of workplace accident victims.

Psychol Assess 2002 Dec;14(4):472-84

In this study research participants completed the Minnesota Multiphasic Personality Inventory-2 (MMPI-2) under standard instructions and then were asked to fake posttraumatic stress disorder (PTSD) when completing the MMPI-2 for a 2nd time in 1 of 4 conditions with different instructions on how to fake PTSD:

(a) uncoached, (b) coached about PTSD symptom information, (c) coached about MMPI-2 validity scales, or (d) coached about both symptoms and validity scales.

These MMPI-2 protocols were then compared with protocols of claimants with workplace accident-related PTSD. Participants given information about the validity scales were the most successful in avoiding detection as faking. The family of F scales (i.e., F, FB, FP), particularly FP, produced consistently high rates of positive and negative predictive power.

36. Davidson JR, Landerman LR, Farfel GM, Clary CM.

Characterizing the effects of sertraline in post-traumatic stress disorder.

Psychol Med 2002 May;32(4):661-70

BACKGROUND: Sertraline has a proved efficacy in post-traumatic stress disorder (PTSD), but it is unknown which symptoms respond or in what sequence this occurs. Such information might be useful clinically and heuristically. **METHOD:** The study examined the effects of sertraline on the individual symptoms of PTSD. It also examined whether early changes in anger explained drug-induced change in other symptoms over time. Mixed models analysis was applied to datasets from two 12-week placebo-controlled trials of sertraline. A validated self-rating scale (DTS) was used to assess treatment efficacy. **RESULTS:** Sertraline was superior to placebo on 15 of 17 symptoms, especially in the numbing and hyperarousal clusters. A strong effect was found on anger from week 1, which partly explained the subsequent effects of sertraline on other symptoms, some of which began to show significantly greater response to drug than to placebo at week 6 (emotional upset at reminders, anhedonia, detachment, numbness, hypervigilance) and week 10 (avoidance of activities, foreshortened future). **CONCLUSIONS:** Sertraline exercises a broad spectrum effect in PTSD. Effects are more apparent on the psychological

rather than somatic symptoms of PTSD, with an early modulation of anger and, perhaps, other affects, preceding improvement in other symptoms.

37. Garcia R.

Stress, synaptic plasticity, and psychopathology.

Rev Neurosci 2002;13(3):195-208

It is now generally recognized that stressful events play a critical role in the genesis of psychopathology. The neurobiological mechanisms that mediate the contribution of stressful events to the manifestation of psychiatric disorders may include changes in synaptic efficacy in different brain areas. Numerous studies in animals have begun to identify some of these areas through experiments manipulating stressful components. This review focuses on alterations of synaptic efficacy in the hippocampus, the lateral septum, and the medial prefrontal cortex that mimic the pathophysiology of depression and post-traumatic stress disorder.

38. Simpson TL.

Department of Veterans Affairs, VA Puget Sound Health Care System

Women's treatment utilization and its relationship to childhood sexual abuse history and lifetime PTSD.

Subst Abus 2002 Mar;23(1):17-30

A central issue in the substance abuse literature is whether a history of childhood sexual abuse (CSA) is a risk factor for poorer treatment outcomes. Although there is a strong belief that CSA is associated with increased substance abuse treatment utilization and relapse among women clients, most empirical evidence does not support this position. This study addresses this conundrum by exploring several possible explanations among a sample of women in substance abuse treatment. Unexpectedly, the results indicate that women with more severe histories of CSA were likely to have received less lifetime substance abuse treatment, although they were likely to have received more mental health treatment. In addition, the expected interaction between posttraumatic stress disorder (PTSD) status and CSA status and increased rates of both types of treatment was not found. However, participants with both PTSD and CSA concentrated on mental health treatment while those with only PTSD focused on substance abuse treatment.

39. Cosgrove DJ, Gordon Z, Bernie JE, Hami S, Montoya D, Stein MB, Monga M.

Sexual dysfunction in combat veterans with post-traumatic stress disorder.

Urology 2002 Nov;60(5):881-4

OBJECTIVES: To evaluate the prevalence, clinical correlates, and severity of sexual dysfunction in combat veterans with and without post-traumatic stress disorder (PTSD) using a validated instrument for assessing sexual function. The results of recent studies have suggested that combat veterans with PTSD experience a higher rate of sexual dysfunction than do those without PTSD. **METHODS:** We administered the International Index of Erectile Function (IIEF) and a demographic and health questionnaire to male combat veterans undergoing treatment for PTSD and to age-comparable male combat veterans without PTSD. **RESULTS:** The mean total IIEF score was significantly lower in the 44 patients with PTSD than in the 46 controls (26.38 versus 40.86; $P = 0.035$). With respect to the individual IIEF domains, patients with PTSD had poorer scores on overall satisfaction and orgasmic function

and showed trends toward poorer scores on intercourse satisfaction and erectile function. No statistically significant difference was observed for sexual desire. The rate of erectile dysfunction was 85% in patients with PTSD and 22% in controls. Moderate to severe erectile dysfunction was present in 45% of the patients with PTSD and in only 13% of controls. Significantly more patients with PTSD (57%) than controls (17%) were using psychotropic medications. CONCLUSIONS: Combat veterans with PTSD experience a significantly higher rate of sexual dysfunction than do veterans without PTSD and show impairment in some, but not all, specific domains of sexual function. The IIEF may be useful in evaluating the response to treatment of erectile dysfunction. Clinicians should proactively address the sexual concerns of combat veterans with PTSD.